

**WHAT IS CLAIMED IS**

1. An apparatus for generating a control signal of a target beacon transmission time, comprising:

a timing synchronization timer;

5 a comparator for comparing the time of the timing synchronization timer with a predetermined target beacon transmission time, and generating a control signal of the target beacon transmission time if the comparison is equivalent; and

an adder for setting the next target beacon transmission time by adding a beacon interval to the predetermined target beacon transmission time when the control signal of the target beacon transmission time is generated.

2. The apparatus for generating a control signal of a target beacon transmission time of Claim 1, wherein the adder comprises an arithmetic enablement switch, which performs an addition operation when the control signal of the target beacon transmission time is generated.

3. The apparatus for generating a control signal of a target beacon transmission time of Claim 1, wherein the adder comprises:

a first input port for receiving the predetermined target beacon transmission time;

an output port electrically connected to the comparator; and

a second input port electrically connected to the output port.

4. The apparatus for generating a control signal of a target beacon transmission time of Claim 3, further comprising:

25 a register for storing the value of a beacon interval; and

a multiplexer electrically connected to the adder, including:

a first input port for receiving the predetermined target beacon transmission time;

a second input port electrically connected to the register;  
5 and

an output port electrically connected to the first input port of the adder.

5. The apparatus for generating a control signal of a target beacon transmission time of Claim 1, further comprising a loss detector electrically connected to an output port of the comparator.  
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6. The apparatus for generating a control signal of a target beacon transmission time of Claim 5, wherein the loss detector comprises a timer, and the loss detector resets the timer to zero when the control signal of the target beacon transmission time is received and generates a loss signal when the timer exceeds a predetermined time.  
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7. An apparatus for generating a control signal of a target beacon transmission time, electrically connected to a host setting a predetermined target beacon transmission time, the apparatus comprising:

a timing synchronization timer;

20 a comparator for comparing the time of the timing synchronization timer with the predetermined target beacon transmission time, and generating the control signal of the target beacon transmission time if the comparison is equivalent; and

an adder for setting the next target beacon transmission time by adding a beacon interval to the predetermined target beacon transmission time when the control signal of the target beacon transmission time is generated.  
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8. The apparatus for generating a control signal of a target beacon transmission time of Claim 7, wherein the comparator comprises:

a first input port electrically connected to the timing synchronization timer;

5 a second input port electrically connected to the adder for receiving the predetermined target beacon transmission time; and

an output port for outputting the control signal of the target beacon transmission time.

9. The apparatus for generating a control signal of a target beacon transmission time of Claim 8, wherein the adder comprises:

10 a first input port for receiving the predetermined target beacon transmission time;

an output port electrically connected to a second input port of the comparator for outputting the predetermined target beacon transmission time to the comparator; and

15 a second input port electrically connected to the output port.

10. The apparatus for generating a control signal of a target beacon transmission time of Claim 9, further comprising a multiplexer electrically connected to the host and the adder, wherein the multiplexer comprises:

20 a first input port electrically connected to the host for receiving the predetermined target beacon transmission time;

a second input port electrically connected to a register storing the value of the beacon interval; and

25 an output port electrically connected to the first input port of the adder for outputting the predetermined target beacon transmission time to

the adder.

11. The apparatus for generating a control signal of a target beacon transmission time of Claim 7, further comprising a loss detector electrically connected to the output port of the comparator.

5        12. The apparatus for generating a control signal of a target beacon transmission time of Claim 11, wherein the loss detector comprises a timer, and the loss detector resets the timer to zero when the control signal of the target beacon transmission time is received and generates a loss signal when the timer exceeds a predetermined time.

10        13. A method for generating a control signal of a target beacon transmission time, comprising the steps of:

setting a predetermined target beacon transmission time;

reading the time of a timing synchronization timer;

15        comparing the time of the timing synchronization timer with the predetermined target beacon transmission time; and

generating a control signal of the target beacon transmission time if the comparison is equivalent.

14. The method for generating a control signal of a target beacon transmission time of Claim 13, further comprising the step of:

20        setting the next target beacon transmission time by adding a beacon interval to the predetermined target beacon transmission time when the comparison is equivalent.

15. The method for generating a control signal of a target beacon transmission time of Claim 13, further comprising the step of:

25        resetting the predetermined target beacon transmission time if the control signal of the target beacon transmission time is not generated after

a predetermined time.

16. The method for generating a control signal of a target beacon transmission time of Claim 15, wherein the predetermined time is two beacon intervals.